



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,874	09/29/2003	Yoshimitsu Namioka	62807-143	5406

7590 07/11/2007
MCDERMOTT, WILL & EMERY
600 13th Street, N.W.
Washington, DC 20005-3096

EXAMINER

ALI, FARHAD

ART UNIT	PAPER NUMBER
----------	--------------

2109

MAIL DATE	DELIVERY MODE
-----------	---------------

07/11/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/671,874

Applicant(s)

NAMIOKA ET AL.

Examiner

Farhad Ali

Art Unit

2109

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/29/2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nikunen et al. (US 2005/0165939 A1) hereinafter Nikunen, in view of Cole (US 6,714,589 B1).

CLAIM 1

Nikunen discloses a data communication method comprising steps of:
transmitting data from a first computer to a second computer by using a data transmission protocol restricting data transmission from the second computer to the first computer (Nikunen – Paragraph [0027], “the process control network 3 is connected to the external communication network 5 via a one-way data transfer device 12 included in communication equipment”);

Nikunen does not disclose transmitting, a signal representative of data reception at the second computer, from the second computer to the first computer by using a protocol at a layer lower than the data transmission protocol

Cole discloses transmitting, a signal representative of data reception at the second computer, from the second computer to the first computer by using a protocol at a layer lower than the data transmission protocol (Cole - Column 3 Lines 52-55,

Art Unit: 2109

“modifying a physical layer operating parameter of the modem in response to identifying the primitive synchronization signal”).

It would have been obvious to one of ordinary skill in the art to utilize Nikunen’s data communication method with Cole’s lower layer acknowledgement signal. Cole’s lower layer acknowledgment is a type of response that is commonly known to be more reliable than higher protocol-level signals. Thus, combining Cole’s method of sending an acknowledgement signal with Nikunen’s data communication method would add further security and reliability to the Nikunen’s data communication method.

CLAIM 2

Cole discloses a data communication method according to claim 1, wherein restricting data transmission from the second computer to the first computer is performed at a physical layer (Cole - Column 3 Lines 52-55, “modifying a physical layer operating parameter of the modem in response to identifying the primitive synchronization signal”).

It would have been obvious to one of ordinary skill in the art to utilize Nikunen’s data communication method with Cole’s lower layer acknowledgement signal (Physical layer). Cole’s lower layer acknowledgment is a type of response that is commonly known to be more reliable than higher protocol-level signals. Thus, combining Cole’s known method of sending an acknowledgement signal with Nikunen’s data communication method would add further security and reliability to the Nikunen’s data communication method.

CLAIM 3

A data communication method according to claim 2, wherein the signal representative of data reception at the second computer is transmitted via a signal line different from a signal path via which data is transmitted from the first computer to the second computer. (Cole Column 7 Lines 31-35, "In other words, an independent transmission path may be formed using some of the tones, and these tones could be used for primitive level communications to control the rest of the tones").

It would have been obvious to one of ordinary skill in the art to utilize Nikunen's data communication method with Cole's lower layer acknowledgement signal via a different signal line. Cole's lower layer acknowledgment is a type of response that is commonly known to be more reliable than higher protocol-level signals. Utilizing a signal line different from the signal path via which data is transmitted adds further security from interference. Thus, combining Cole's known method of sending an acknowledgement signal via an independent transmission path with Nikunen's data communication method would add further security and reliability to the Nikunen's data communication method.

CLAIM 4

Nikunen discloses a data communication method according to claim 3, wherein the signal representative of data reception at the second computer is represented by a

change in voltage or current (Nikunen – Paragraph [0039], “the receiver 15 gives the transmitter 17 an impulse for transmitting an acknowledgement”).

CLAIM 5

Nikunen discloses a data communication method according to claim 4, wherein restricting data transmission from the second computer to the first computer is performed by removing communication lines via which data is transmitted from the second computer system to the first computer system (Nikunen – Paragraph [0028] “In order to achieve a sufficient security level, the one-way data transfer device can be implemented e.g. as a device compiled using circuits, having no configuration potentiality or user interface. This is to ensure that users are incapable of even temporarily enabling the one-way data transfer device to allow messages to be transmitted also in the second transfer direction”).

CLAIM 6

Nikunen discloses an information processing apparatus having a first computer comprising: a data transmission processing unit for transmitting data to a second computer; and an input unit for inputting from the second computer, and whereby data reception at the second computer is restricted (Nikunen – Paragraph [0027], “the process control network 3 is connected to the external communication network 5 via a one-way data transfer device 12 included in communication equipment”).

Nikunen does not disclose a signal representative of reception of the data at the second computer, wherein the signal representative of reception of the data at the second computer is input to said input unit from the second computer by using a protocol at a level lower than a protocol of data transmission.

Cole discloses a signal representative of reception of the data at the second computer, wherein the signal representative of reception of the data at the second computer is input to said input unit from the second computer by using a protocol at a level lower than a protocol of data transmission (Cole - Column 3 Lines 52-55, "modifying a physical layer operating parameter of the modem in response to identifying the primitive synchronization signal").

It would have been obvious to one of ordinary skill in the art to utilize Nikunen's data communication method with Cole's lower layer acknowledgement signal via a different signal line. Cole's lower layer acknowledgment is a type of response that is commonly known to be more reliable than higher protocol-level signals. Utilizing a signal line different from the signal path via which data is transmitted adds further security from interference. Thus, combining Cole's known method of sending an acknowledgement signal via an independent transmission path with Nikunen's data communication method would add further security and reliability to the Nikunen's data communication method.

CLAIM 7

Nikunen discloses an information processing apparatus according to claim 6, wherein said input unit is an electric contact unit connected to a communication line capable of only physical one-way communications from the first computer to the second computer (Nikunen – Paragraph [0028] “In order to achieve a sufficient security level, the one-way data transfer device can be implemented e.g. as a device compiled using circuits, having no configuration potentiality or user interface. This is to ensure that users are incapable of even temporarily enabling the one-way data transfer device to allow messages to be transmitted also in the second transfer direction”).

CLAIM 8

Nikunen discloses a data communication method according to claim 7, wherein data is controlled not to be transmitted from the second computer to the first computer by removing communication lines for transmitting data from the second computer to the first computer, from a communication path interconnecting the first and second computer (Nikunen – Paragraph [0028] “In order to achieve a sufficient security level, the one-way data transfer device can be implemented e.g. as a device compiled using circuits, having no configuration potentiality or user interface. This is to ensure that users are incapable of even temporarily enabling the one-way data transfer device to allow messages to be transmitted also in the second transfer direction”).

CLAIM 9

Nikunen discloses a data communication method according to claim 8, wherein data is transmitted only from the first computer to the second computer in one-way communications by using the communication path interconnecting the first and second computers (Nikunen – Paragraph [0028] “In order to achieve a sufficient security level, the one-way data transfer device can be implemented e.g. as a device compiled using circuits, having no configuration potentiality or user interface. This is to ensure that users are incapable of even temporarily enabling the one-way data transfer device to allow messages to be transmitted also in the second transfer direction”).

CLAIM 10

Nikunen discloses a data communication method according to claim 7, wherein said electric contact unit is a contact to be used for receiving information representative of reception of data at the second computer (Nikunen – Paragraph [0028] “In order to achieve a sufficient security level, the one-way data transfer device can be implemented e.g. as a device compiled using circuits”).

CLAIM 11

Nikunen discloses an information processing apparatus according to claim 10, wherein data is transmitted from the first computer to the second computer (Nikunen – Paragraph [0027], “the process control network 3 is connected to the external communication network 5 via a one-way data transfer device 12 included in

Art Unit: 2109

communication equipment”), while confirming reception of the data by using said electric contact unit (Nikunen – Paragraph [0028] “In order to achieve a sufficient security level, the one-way data transfer device can be implemented e.g. as a device compiled using circuits”).

CLAIM 12

A data communication method according to claim 6, wherein the number of transmission times is added to data to be transmitted from said data transmission processing unit, and the data is transmitted to a reception application which receives the data basing upon a port number (Cole Column 6 Lines 47-52 “may be repeated by the modem indefinitely until the request is acknowledged. Alternatively, the request may be repeated a predetermined number of times. After receiving the bit swap request, the modem 20 at the central office 30 responds...”).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Farhad Ali whose telephone number is (571) 270-1920. The examiner can normally be reached on Monday thru Friday, 7:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey C. Pwu can be reached on (571) 272-6798. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2109

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

FA



JEFFREY PWU
SUPERVISORY PATENT EXAMINER